

REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 21-24, 26-33, and 36-40 are pending, of which only claim 21 is amended. Claims 1-20, 25, 34, and 35 were previously cancelled without prejudice to or disclaimer of the subject matter set forth therein. Claims 36 and 37 are withdrawn. Claim 21 is independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Examiner Interview

If, during further examination of the present application, a discussion with the Applicants' Representative would advance the prosecution of the present application, the Examiner is encouraged to contact Carl T. Thomsen, Registration No. 50,786, at 1-703-208-4030 (direct line) at his convenience.

Rejections Under 35 U.S.C. §102(b) and §103(a)

Claims 21, 23, 28, 30, 32, 33, and 38-40 stand rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Bonk et al. (U.S. 4,731, 273);

claims 21 and 22 stand rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Woods (U.S. 4,414,275);

claims 21, 24, 26, and 27 stand rejected under 35 U.S.C. §102(b) as being anticipated by, or in the alternative, under 35 U.S.C. §103(a) as being unpatentable over Komiyama et al. (U.S. 5,118,567);

claims 21 and 31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Polski et al. (U.S. 5,599,601); and

claim 29 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Bonk et al. in view of Lautenschlaeger et al. (U.S. 4,814,215).

These rejections are respectfully traversed.

Amendments to Independent Claim 21

While not conceding the appropriateness of the Examiner's rejection, but merely to advance the prosecution of the present application, independent claim 21 has been amended herein to recite a combination of elements directed to a pressure-sensitive adhesive material or a sealing material which has a three-dimensional structure and a defined cross-sectional contour, including *inter alia*

“wherein said cross-sectional contour deviates from a flat two-dimensional geometry, and

wherein said material is present in a form of strings, strands or strips,

wherein said strings, strands or strips have a round, semicircular, oval, elliptical, triangular, quadrangular, V-shaped, polygonal or irregular cross-sectional contour and a surface that is bent, curved or provided with edges corresponding to said cross-sectional contour, and

wherein said strings, strands or strips have a thickness of 0.5 to 50 mm”.

Support for the novel features of claim 21 as amended, can be found, for example, in paragraphs [0007] and [0008].

The Applicants respectfully submit that the combination of elements as set forth in independent claim 21 is not disclosed or made obvious by the prior art of record, including Bonk et al., Woods, Komiyama et al., Polski et al, and Lautenschlaeger et al.

An object of the present invention was to overcome the disadvantages of flat adhesive systems, i.e., materials with small thickness relative to their surface dimensions so that they are regarded as almost two-dimensional objects.

The problem is solved by the adhesive materials in the form of stings, stands or strips of the present invention which have a three-dimensional structure and a defined cross-sectional contour.

While “flat” adhesive systems have a quadrangular cross-sectional contour with a substantially constant thickness, the cross-sectional contour of the adhesive materials of the present invention deviates from this flat two dimensional geometry, and is round, semicircular, oval, elliptical, triangular, quadrangular, V-shaped, polygonal or irregular shaped and has a thickness of 0.5 to 50mm.

Accordingly, the surface of the adhesive material of the present invention is bent, curved or provided with edges corresponding to the respective cross-sectional contour.

Further, the material of the present invention is produced by polymerization of a polymerizable mass comprising at least one compound selected from the group consisting of aromatic (meth)acrylates, alicyclic (meth)acrylates, polycyclic (meth)acrylates, heterocyclic (meth)acrylates, di-, tri- and higher (meth)acrylates, epoxide acrylates, epoxides, vinyl ethers, vinyl esters, and styrene.

Since the teachings of the cited prior art have been fully discussed previously, in the following discussion only the relevant aspects are summarized.

Bonk et al. (U.S. '273) describe the use of heat activated pressure sensitive adhesives (column 11, line 4) comprising acrylate terpolymers and crosslinking agents for laminating heat-recoverable sheets onto a substrate.

As the object of the adhesive is to connect opposite sides of the sheet, the adhesive has the form of a thin layer to ensure an optimal connection of the ends of the sheet. Therefore, the adhesive material is "flat" shaped, this means its thickness is small in comparison to its surface. Moreover, the layer actually has to be limited in its thickness to guarantee thorough crosslinking of the adhesive to stabilize the bond. Also, a thick layer of adhesive would interfere with the stability of the bond since the cohesion of the adhesive layer is weakened with increasing thickness and the bond would be more likely to break up. Hence, Bonk et al. could not have suggested the adhesive materials of the present invention with a deviating cross-sectional shape and a thickness of 0.5 to 50 mm.

Woods (US '275) describes a flexible tape comprising a specially treated thermoplastic support wherein the support is coated with a photo-sensitive adhesive composition.

However, Woods gives no hint to adhesive materials that have other than "flat", quadrangular forms as claimed in the present invention. Therefore, one skilled in the art would not have considered the teachings of Woods to solve the problem of the present invention.

Komiyama et al. (US '567) a dicing tape is described which has discrete adhesive areas on a carrier layer to which objects to be transported can be adhered and afterwards be released. The tackiness of the adhesive areas is induced by heat so that the objects can be attached and released in a controlled fashion.

A continuous adhesive strip with a non-flat cross-sectional form is neither described nor suggested by Komiyama et al., rather the discrete adhesive areas are flat shaped and have a minimal thickness to ensure good release properties without any residue of the adhesive on the transported object. Hence, Komiyama et al. could not have made the present invention obvious.

Polski et al. (US '601) teach the use of flat adhesive tapes to provide low-cost pressure-sensitive adhesive fastening tapes and release tapes, preferably to be used in diapers. The tapes can be based on acrylates and the cohesive strength of the adhesive layer can be enhanced by crosslinking. Nevertheless, adhesive materials according to claim 21 of the present invention are not described or even suggested by Polski et al.

Lautenschläeger et al. (US '215) which was cited in the rejection of claim 29 is directed to controllably curable adhesive strips for the mounting of windows, wherein the curing is induced by UV-radiation. Also, the adhesive materials as described and claimed in the present invention have not been made obvious by Lautenschläeger et al.

As to the alleged admission of the Applicants, it is pointed out that this statement was not directed to the obviousness of the present invention, but rather to the undisputable large number of documents relating to pressure sensitive adhesive strips or tapes.

However, strings, strands or strips with a distinguishable 3-dimensional form or cross-section have not been described or suggested in the prior art. Therefore, adhesive strips in this special 3-dimensional form are inventive despite the fact that obviously every object has have 3 dimensions.

At least for the reasons described above, the Applicants respectfully submit that the combination of elements as set forth in independent claim 21 is not disclosed or made obvious by the prior art of record, including Bonk et al., Woods, Komiyama et al., Polski et al., Lautenschlaeger et al.

Accordingly, reconsideration and withdrawal of these rejections are respectfully requested.

Independent claim 21 is in condition for allowance.

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Dependent Claims

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, as well as for the additional novel limitations set forth therein.

All claims of the present application are now in condition for allowance.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

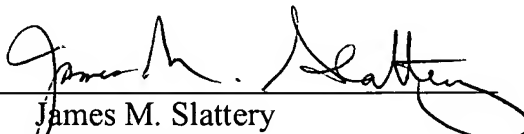
If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030 (direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

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